Remarks

Specification

Applicant has amended the specification in respect of minor grammatical errors and informalities only. No new matter is entered.

Abstract

Applicant has amended the abstract in respect of minor grammatical errors and/or informalities only. No new matter is entered.

Claim Rejections under 35 U.S.C. 102

Claims 1, 3, 5 and 6 are rejected under 35 U.S.C. 102(e) as being anticipated by Shin et al (U.S. Pat. No. 6,803,260 B2).

In response to this rejection, applicant has amended claims 1, 3 and 6, by adding more limitations therein to define the claimed invention over the prior art cited by Examiner. Claim 5 remains unchanged. The amendments find support in the drawings and specification of the disclosure of the originally filed application. Thus, no new matter is entered.

Regarding amended claim 1, the present invention discloses an optical polarized light source device comprising: at least one carbon nanotube bundle; and electrodes electrically connected with the at least one carbon nanotube bundle so as to resistance heat the at least one carbon nanotube bundle for making a polarized light beam emit therefrom. Referring to FIG. 1, electrodes 206 are respectively connected with a carbon nanotube bundle 204, and a voltage is applied to the electrodes 206. As a filament, the carbon nanotube bundle 204 is resistance heated thereby, and a polarized incandescent light beam is emitted therefrom. However, **Shin et al fails to disclose that the electrodes connected with the carbon nanotubes resistance heat the carbon nanotubes, and make a polarized incandescent light beam emit therefrom.** In Shin et al, a spin valve single electron transistor utilizing carbon nanotubes, illustrated in FIGS. 20 and 21, comprises a source 210, a drain 220, a carbon nanotube bridge 260 formed therebetween, and another two carbon nanotube bridges 270 and 280 defined as first and second gates 230 and 240. The carbon nanotube bridge 260 is a channel of the single electron transistor to transmit an electric current therethrough. The carbon nanotube bridges 270 and 280 are applied to have a positive voltage to form energy barriers at the points C1 and C2. In the case of the carbon nanotube bridge 260 between the source 210 and the drain 220, the portion between the points C1 and C2 is isolated from the surrounding portions, thereby forming a quantum point. Therefore, compared to the present invention, the carbon nanotubes and the electrodes connected therewith are different from those of the present invention.

In summary, amended independent claim 1 is clearly different from and novel over the prior art cited by Examiner.

Applicant further asserts that a person of ordinary skill in the art could not have derived the optical polarized light source device of the present invention from a consideration of Shin et al. That is, amended independent claim 1 is submitted to be patentable under 35 U.S.C. 103 over the prior art cited by Examiner, and withdrawal of the rejection and allowance of the claim are respectfully requested.

Regarding amended dependent claim 3, this recites that each of the electrodes comprises at least one gold wire connected with the at least one carbon nanotube bundle for establishing an electrical connection therebetween. Thus, the at least one gold wire is electrically connected between bodies of each of the electrodes and the carbon nanotube bundle. A current passes along the carbon nanotube bundle through the at least one gold wire. However, **Shin et al fails to disclose a gold wire between electrodes and carbon nanotubes**. In Shin, a material of an electrode or an electrode layer for the growth preventing film is disclosed, such as Niobium (Nb) or Molybdenum (Mo). This is manifestly different from the gold wire of the present invention.

Hence, amended dependent claim 3 is clearly different from and novel over the prior art cited by Examiner.

Further, claim 3 directly depends from amended independent claim 1, which is asserted to be allowable.

Therefore, allowance of claim 3 is also respectfully requested.

Regarding original dependent claim 5, this recites that the electrodes are made of gold material. However, **Shin et al fails to disclose that gold material can be used as the electrodes**. In Shin, a material of an electrode or an electrode layer for the growth preventing film is disclosed, such as Niobium (Nb) or Molybdenum (Mo). This is manifestly different from the gold material of the present invention.

Hence, original dependent claim 5 is clearly different from and novel over the prior art cited by Examiner.

Further, claim 5 directly depends from amended independent claim 1, which is asserted to be allowable.

Therefore, allowance of claim 5 is also respectfully requested.

Regarding amended independent claim 6, the present invention discloses an optical polarized light source device comprising: a carbon nanotube; and electrodes electrically connected with the carbon nanotube so as to resistance heat the carbon nanotube for making a polarized light beam emit therefrom. As asserted above, **Shin et al fails to disclose that the electrodes connected with the carbon nanotube resistance heat the carbon nanotube, and make a polarized incandescent light beam emit therefrom.** In Shin, the carbon nanotube bridge 260 is a channel of the single electron transistor to transmit an electric current therethrough. The carbon nanotube bridges 270 and 280 are applied to have a positive voltage to form energy barriers at the points C1 and C2. Therefore, compared to the present invention, the carbon nanotube and the electrodes connected therewith are different from those of the present invention.

In summary, amended independent claim 6 is submitted to be different from and novel over the prior art cited by Examiner.

Applicant further asserts that a person of ordinary skill in the art could not have derived the optical polarized light source device of the present invention from a consideration of Shin et al. That is, amended independent claim 6 is submitted to be patentable under 35 U.S.C. 103 over the prior art cited by Examiner, and withdrawal of the rejection and allowance of the claim are respectfully requested.

Allowable Subject Matter

Claims 7-16 are allowed. Applicant has amended claims 7, 15 and 16 in respect of minor grammatical errors and informalities only. The substance of the claims remains the same as before, and the allowance should be maintained.

Claim 2 and 4 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

In response to this objection, applicant has added new independent claims 17 and 20, which respectively are the equivalents of original claims 2 and 4 rewritten in independent form including all of the limitations of the original base claim and any intervening claims. Therefore, the new independent claims 17 and 20 should be allowable. Accordingly, dependent claims 18 and 19 should also be allowable.

In view of the above claim amendments and remarks, the subject application is believed to be in a condition for allowance, and an action to such effect is earnestly solicited.

Respectfully submitted,
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